



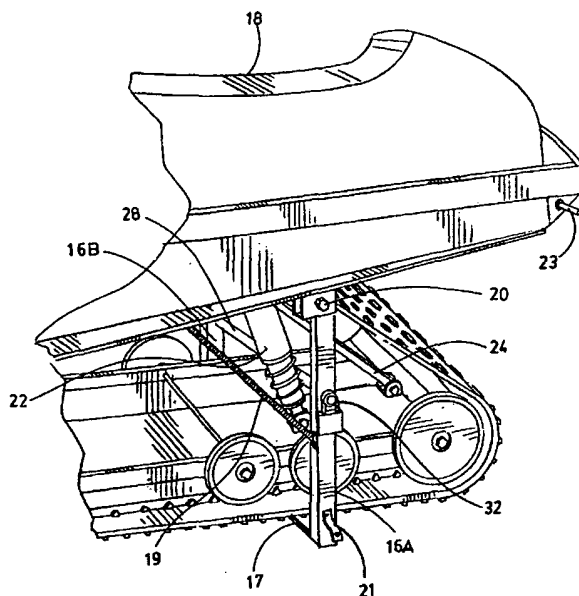
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(51) Int.Cl.<sup>6</sup> B62D 55/116, B60S 9/04, B60R 25/00

(54) **BEQUILLE DE SUPPORT AVEC DISPOSITIF ANTIVOL POUR  
MOTONEIGE**

(54) **STAND FOR SNOWMOBILE WITH THEFT DETERRENT**



(57) La présente invention a pour objet une motoneige pourvue d'une béquille de support servant à éloigner la chenille ou éloigner celle-ci de la surface enneigée afin d'empêcher la chenille d'être figée dans la glace. La motoneige peut être verrouillée en position relevée sur sa béquille afin de prévenir le vol. Le verrouillage peut être effectué par introduction d'une barre de verrouillage à travers les organes mécaniques de la motoneige, par exemple entre un amortisseur et un tirant à suspension de la motoneige, ceux-ci n'étant espacés que lorsque la béquille est mise en oeuvre.

(57) A snowmobile has a kickstand to lift the track out of contact with, or so as to be in only light contact with, the snow surface to inhibit freezing of the track to the snow surface. The snowmobile may be locked in lifted position on the kickstand in provided to deter theft. This may be achieved by directing a locking bar from one side leg of the kickstand to another side leg of the kickstand between parts, for example a shock absorber and a suspension link of the snowmobile, which are spaced apart only when the kickstand is operative.

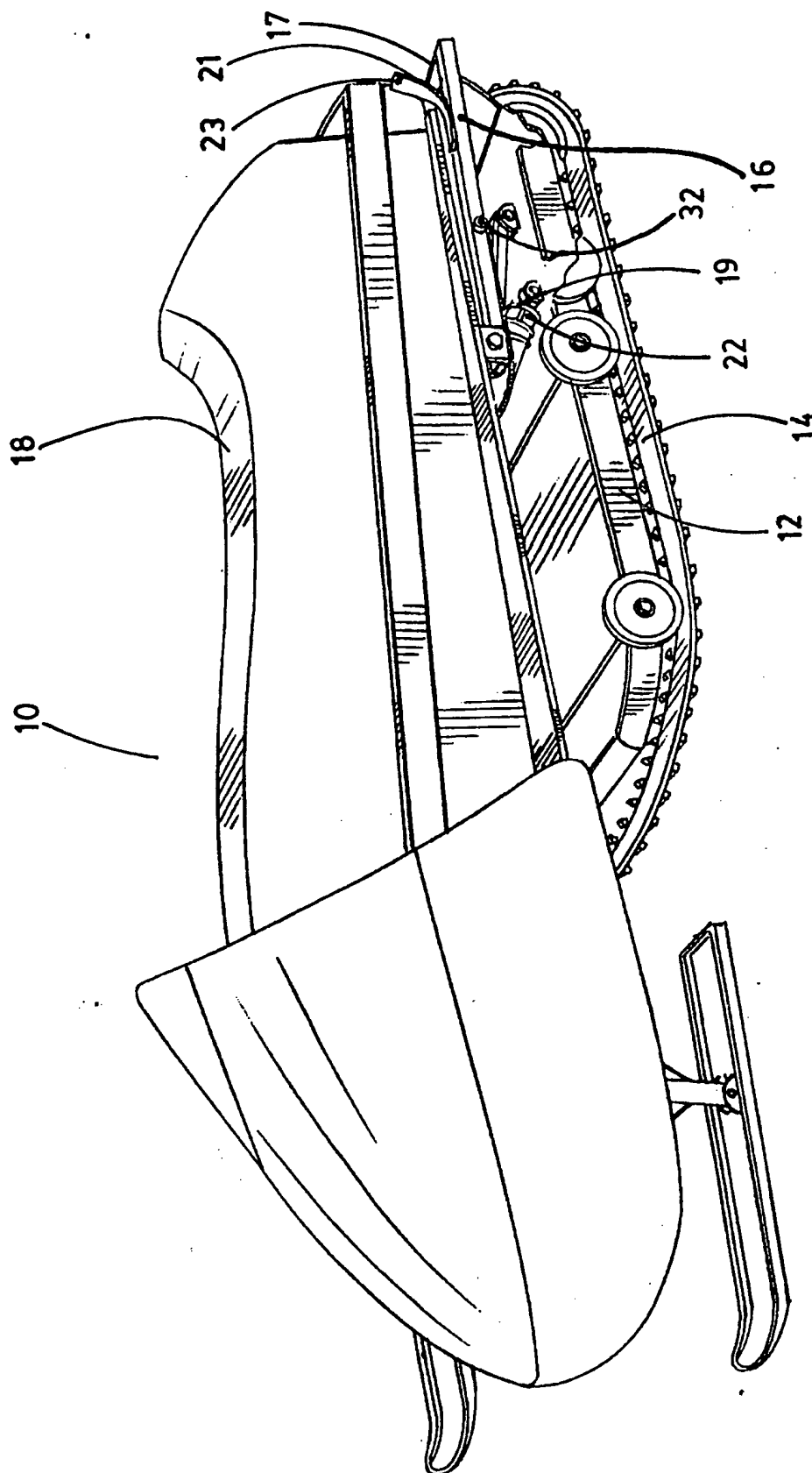
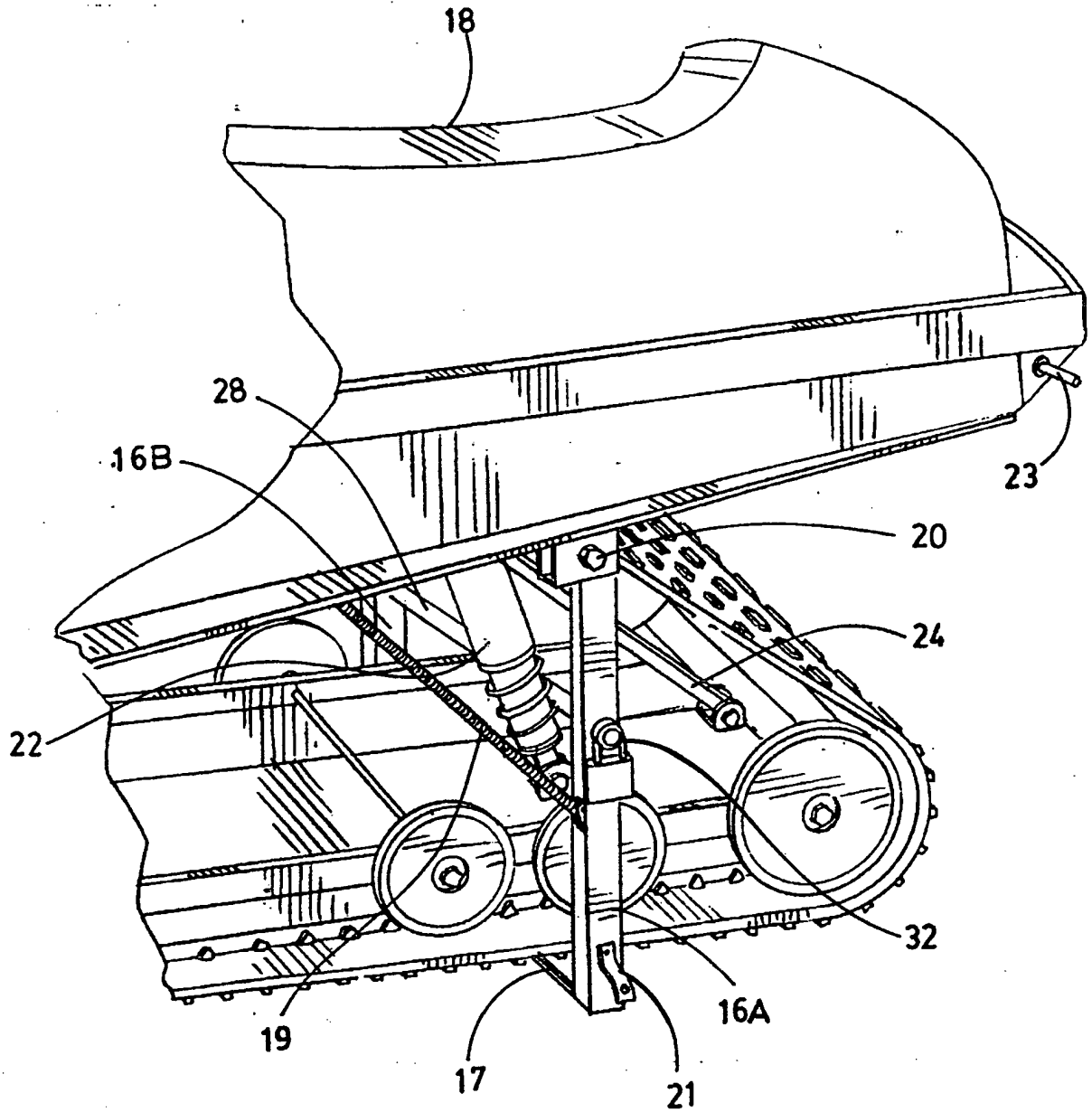


FIGURE 1

FIGURE 2



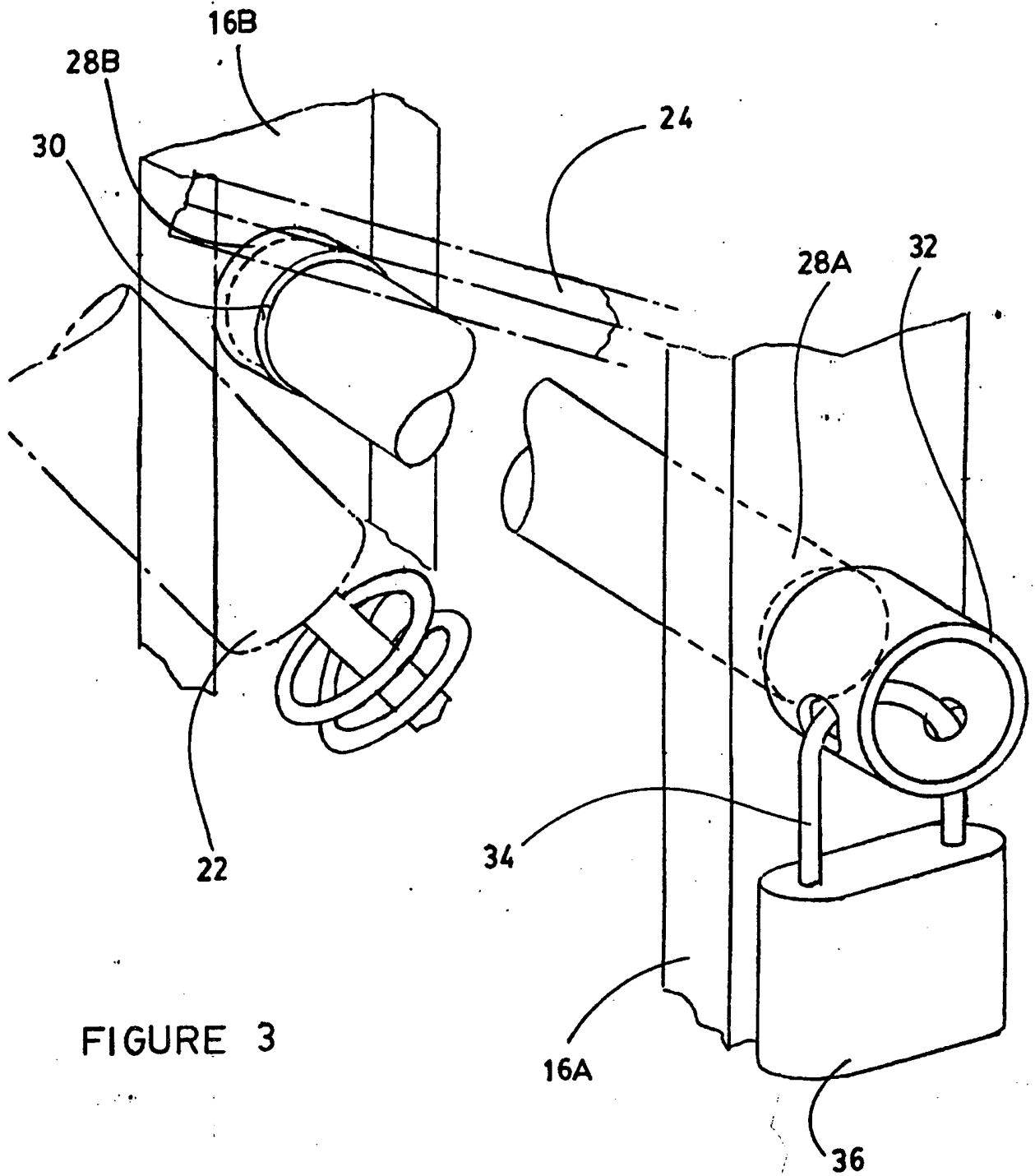
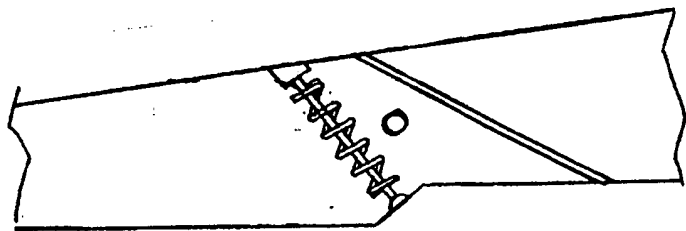
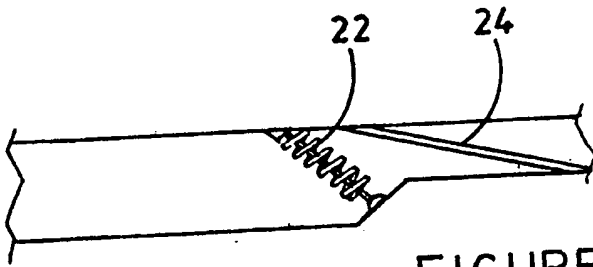
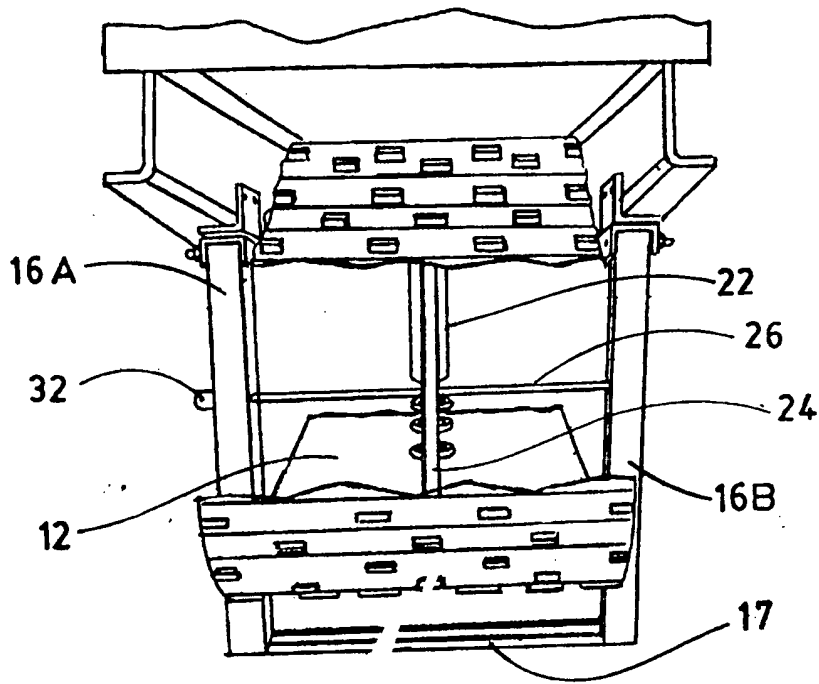


FIGURE 3



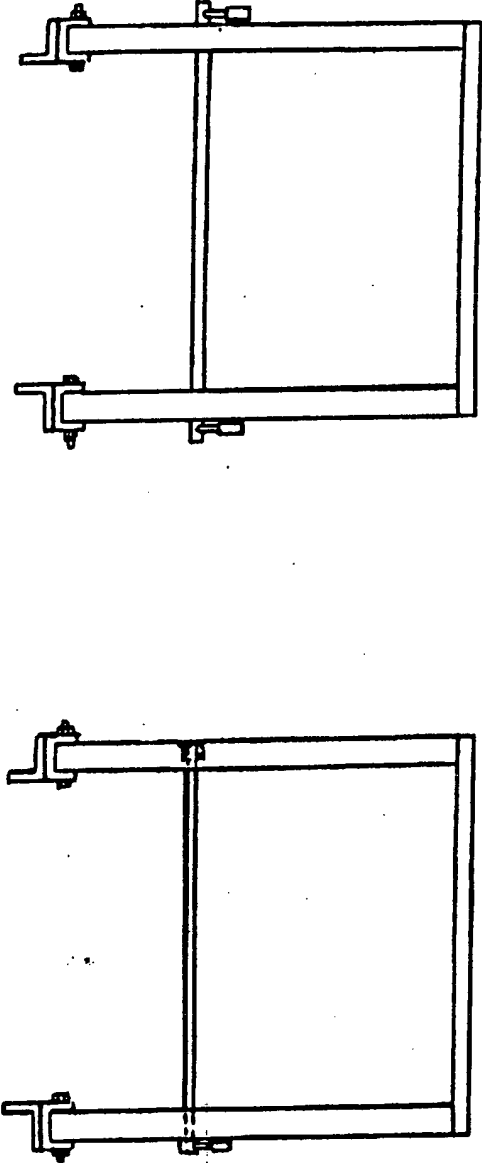


FIGURE 6A

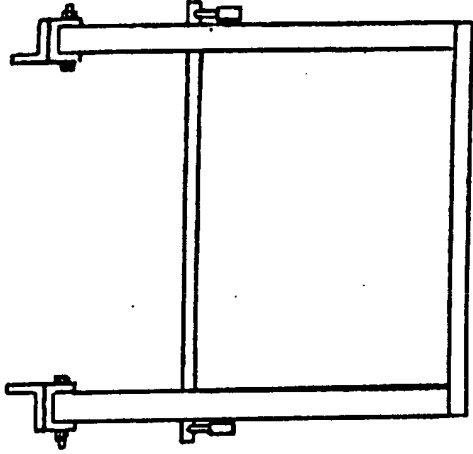


FIGURE 6B

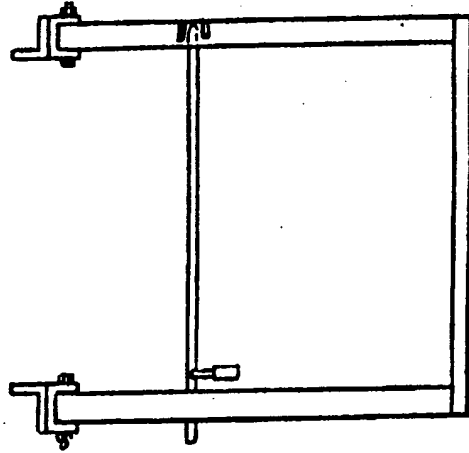


FIGURE 6C

This invention relates to a kickstand for a snowmobile which may be locked in the lifted position as a theft deterrent.

5       The drive for a snowmobile is an endless track having  
lugs or spikes to dig into the snow surface. The track is  
driven by means of drive pulleys from a motor. When the  
snowmobile is maintained stationary for any length of time  
there is a tendency for the track to freeze into the snow  
surface. Restarting movement of the track may at least  
10       require a surge of energy and may cause slippage of the  
drive pulley from the motor thus causing undue wear of the  
pulley and stress on the motor. This tendency to freeze  
into the snow is enhanced with the full weight of the  
snowmobile resting on the track.

15       Assuming there are no undue difficulties in starting  
the track into motion, snowmobiles which have been left  
standing by their operators are easy to steal and, once  
stolen, virtually unrecoverable. Although such vehicles  
have identification numbers no immediately obvious  
20       identification marks are usually provided.

The present inventor has therefore, attempted to  
provide a device which will, on the one hand, alleviate  
difficulties in restarting movement of the track and will,  
on the other hand provide some anti-theft deterrent.

25       According to the invention there is provided a  
snowmobile having a body and a kickstand towards a rear  
portion of the body, the kickstand being hingeable between  
an inoperative "lifted" position in which it is located out  
of contact with the ground and an operative "down" position  
30       for contact with the ground to lift the rear portion of the  
body.

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Preferably, the kickstand comprises a pair of hingeable legs one to each side of the rear portion of the body. A strut may be provided connecting the legs at ground level. Such a strut not only impedes any tendency for the legs to splay apart but also may form a rest under the track when the kickstand is down to lift the rear part of the snowmobile.

The drive track and track deck are connected to the body of the snowmobile through at least one, possibly two, shock absorbers and through connecting links allowing relative movement between the track deck and the snowmobile body so that the ride of the snowmobile is cushioned. When the rear part of the body of the snowmobile is lifted as the kickstand moves into its operative "down" position, the track deck and the track drop with respect to the rear part of the body to extend the shock absorbers and rear linkages between the track deck and the body. The track itself may, depending upon the height of the legs of the kickstand, remain in contact with the snow surface but very little lift is required to alleviate the effect of the weight of the whole snowmobile on the track.

When the kickstand comprises a pair of legs on the opposite sides of the body of the snowmobile a simple locking device may be provided. The locking device may comprise a locking bar extending between the legs of the kickstand and located to impede return of the kickstand to the inoperative position. The locking bar may, for example, extend between the extended shock absorber on one hand and a link between the track support and snowmobile body on the other hand. If any attempt is made to return the kickstand to the inoperative position, the locking bar may impede relative movements between the structural parts to foul proper return of the shock absorbers to their non-extended



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position, the linkage to its normal position and, as a result, the relocating of the body of the snowmobile so that its full weight would be carried by the track and track support rather than by the kickstand.

5           The locking bar may be locked into position with respect to the legs of the kickstand by any convenient means. For example, the locking bar may fit into a blind socket on one leg through an open ended socket on the other end. Withdrawal of the bar from the blind socket and the  
10           open ended socket may be, for example, by providing stop means in one of the open ends of the open ended socket extending outwardly of the bar. Such stop means may be a padlock, the hasp of which fits through apertures in the open end beyond the end of the bar.

15           Alternatively, the bar may pass through apertures in both legs of the kickstand and be secured from withdrawal by means of padlocks, the hasps of which pass through the bar itself outwardly of each leg of the kickstand.

          Alternatively again, the locking bar may project from  
20           one or both legs and be padlocked to a suitable aperture provided thereon through the body of the bar.

Exemplary embodiments of the invention will now be described with reference to the drawings, in which:

          Figure 1 is a perspective view a snowmobile according  
25           to the invention in its running position with its weight resting on its track and track support having a kickstand in an inoperative position;

          Figure 2 shows the snowmobile of Figure 1 with its rear end raised with the kickstand in an operative position;

30           Figure 3 shows one means of attaching a locking bar;

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Figure 4 is a perspective view from the rear of the locking bar of Figure 3;

Figures 5A and 5B show the principle of operation of the locking bar; and

5        Figures 6A, 6B, and 6C are sketches showing alternative methods of locking the locking bar in position.

The drawings show a snowmobile 10 having a track deck 12 and a track 14. A kickstand 16 comprising a pair of legs 16A and 16B connected together at their lower ends is hinged to a rear part of the snowmobile body 18 through hinge pins 20. Figure 1 shows the kickstand 16 hinged into a generally horizontal position clear of the ground where it may not interfere with operation of the snowmobile. Figure 2 shows the kickstand lowered into a generally vertical position to lift the rear part of the body 18 of the snowmobile.

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Kickstand 16 comprises legs 16A, 16B connected by a lower strut 17 which may act as a rest for the track when the kickstand is operational and which may prevent any tendency for legs 16A, 16B to splay apart. Springs 19 are connected on the one hand, to the snowmobile body 18 at a point spaced from hinge pins 20 and, on the other hand, to lower part of respective legs 16A, 16B to bias kickstand 16 into operative position. The positioning of springs 19 is such that when kickstand 16 is located in its non-operative "up" position, the points of attachment of spring 19 to legs 16A, 16B are located so they are beyond the line of pull of the spring. Thus, when kickstand 16 is in its non-operative position there is little or no force then from springs 19 to move into the operative position. Nevertheless strap 21 is provided to attach to pin 23 to fix the kickstand 16 in its non-operative position.

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When the rear part of the body of the snowmobile is lifted as seen in Figure 2, the track support 12 and the track 14 may remain in light contact with the snow banked around strut 17 through extension of shock absorber 22 and pivoting of a link 24 between the body 18 of the snowmobile 10 and the track support 12. While only one link 24 is shown rearwardly of the shock absorber 22, more linkages between the track support and snowmobile body may be provided. Only one link is shown for simplicity.

When the snowmobile is shown in the position shown in Figure 1 resting firmly on its track and track support, the shock absorber 22 is compressed and is located almost horizontally or at a small angle to the horizontal. When the snowmobile is in the position shown in Figure 2, or indeed when the snowmobile lifts into the air or lightens during running operation, the track and track support drop in relation to the snowmobile body resulting in the pivoting of shock absorber 22 so that it approaches more nearly the vertical as, for example, illustrated in Figure 2.

Similarly, when the snowmobile is in the position shown in Figure 1 with its full weight resting on the track support 12 and the track 14, the link 24 is closer to the horizontal than when the snowmobile is in the position shown in Figure 2. As the shock absorber 22 and the link 24 move into the positions shown in Figure 2, the angle between them widens opening a passage there between. This passage narrows or closes completely when the weight of the snowmobile rests squarely on the track support 12 and the track 14.

As a theft deterrent, a locking bar 28 may be inserted between shock absorber 22 and link 24 when the snowmobile is in the raised position shown in Figure 2. When a bar is inserted in this position it may not be possible to return the snowmobile to the lowered operative position because the

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shock absorber 22 and link 24 can not return to their near to horizontal operative locations. Locking bar 28 may be secured in position in any convenient manner for example that shown in Figure 3 or any of those shown in Figures 6A, 6B and 6C. Legs 16A, 16B of kickstand 16 may be formed of metal square U-section or square tube. Conveniently the metal may be a galvanized steel. A blind socket 30 is provided in the lateral thickness of leg 16B to accept an end of bar 28. Leg 16A is provided with a through open-ended socket 32 so that bar 28 may be slotted therethrough so that its end 28B fits into blind socket 30. In this position shock absorber 22 is located to the front of bar 28 and link 24 is located to the rear of it. The other end 28A of bar 28 may be secured to leg 16A by any convenient manner.

As shown in Figure 3 end 28A of bar 28 is held in place by hasp 34 of padlock 36 which passes through end 38 of socket 32 which extends proud of end 28A of bar 28. The hasp 34 of padlock 36 forms a barrier preventing withdrawal of bar 28.

Figures 5A and 5B are line sketches showing the relation stop between bar 28, shock absorbers 22 and link 24 in locked and unlocked positions. When the snowmobile 10 has its weight firmly on the ground, shock absorber 22 and link 24 lie quite closely together (see Figure 5A) but a space opens between them when rear part 18 of snowmobile 10 is lifted (see Figure 5B). The bar 28 slots into that space and snowmobile 10 can not be returned to an operative position until bar 28 is removed to allow shock absorber 22 and link 24 to move together.

There are various ways of securing 28 in blind socket 30 and through socket 32 and some of these are illustrated

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by way of example in Figures 6A, 6B and 6C. Figure 6A shows the bar 28 secured as already described. Figure 6B shows the use of two padlocks the hasps of which pass through holes in bar 28 outwards of legs 16A, 16B, the bar 28  
5 passing through apertures in the legs to extend outwardly thereof. Figure 6C shows the use of blind socket 30 in leg 16A and a padlock hasp passing through an aperture of bar 28 inwardly of leg 16B.

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## I CLAIM:

1. A snowmobile having a body and a kickstand located towards a rear portion of the body, the kickstand being hingeable between an inoperative position in which it is located out of contact with the ground and an operative position for contact with the ground to lift the rear portion of the snowmobile body.  
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2. A snowmobile as claimed in claim 1 in which the kickstand comprises a pair of hingeable legs one to each side of the rear portion of the body.  
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3. A snowmobile as claimed in claim 2 in which the legs of the kickstand are connected together by a strut extending between lower portions thereof.
4. A snowmobile as claimed in claim 2 including locking means to prevent the kick stand being returned to said inoperative position from said operative position.  
15
5. A snowmobile as claimed in claim 4 in which said locking means comprises a bar removably attached to said kickstand to project between parts of the snowmobile which are spaced apart when the kickstand is in its operative position and which are adjacent when the kickstand is in its inoperative position.  
20
6. A snowmobile as claimed in claim 5 in which said parts comprise a shock absorber and a pivotal link between a body of the snowmobile and a carrier for snowmobile track.  
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7. A snowmobile as claimed in claim 6 in which one end of said bar is located in a blind socket in one leg of the kick stand and another end of said bar is attached to the other leg of said kickstand.

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8. A snowmobile as claimed in claim 7 in which said other  
end of the bar is located in a through socket of said other  
leg, which through socket has an outer end extending  
outwardly of said leg beyond said other end of said bar,  
5 stop means for said bar being provided in said out end of  
said socket.

9. A snowmobile as claimed in claim 8 in which said stop  
means comprises the hasp of a padlock located through  
apertures of said outer end.

ABSTRACT OF THE DISCLOSURE

5 A snowmobile has a kickstand to lift the track out of  
contact with, or so as to be in only light contact with, the  
snow surface to inhibit freezing of the track to the snow  
surface. The snowmobile may be locked in lifted position on  
the kickstand in provided to deter theft. This may be  
achieved by directing a locking bar from one side leg of the  
kickstand to another side leg of the kickstand between  
parts, for example a shock absorber and a suspension link of  
10 the snowmobile, which are spaced apart only when the  
kickstand is operative.